

Case Study

Footscray Police Department

Footscray Police Department adopts Genetec's Omnicast video surveillance system to increase city-wide safety and fight crime



Located just 5 km west of Melbourne, Victoria, Australia, Footscray is a small suburb which is home to a diverse and multicultural population of over 75,000. As part of the City of Maribyrnong, Central Footscray is bustling with a myriad of shops and restaurants, and its easy transportation via bus or train to Melbourne continues to spur growth in the area. Footscray's convenient location has also attracted many new businesses and recently, local government initiated plans for a \$500 million high-density commercial and residential development project.

Business challenge

Like most developing suburbs, Footscray was seeing an increase in street-level crime such as gang activity, drug trafficking, assaults, theft and vandalism. Although the Footscray Police Department was working around the clock to apprehend suspects and deter criminal activities, lack of technology, specifically video surveillance, forced them to be more reactive than proactive when responding to critical events.

According to Brendan O'Mahoney, Detective Acting Sergeant at Footscray Crime Investigation Unit, "We ran a number of operations over the years where we would install covert cameras; so we would put them up and then take them down, but this became very costly in terms of money, time and resources."

Detective O'Mahoney knew Footscray needed to get Maribyrnong City Council on board to help fund the implementation of a more permanent video surveillance system. He recruited his team and brought forth the case to City Council representatives who recognized the value the surveillance system would offer; not only in terms of increasing safety and deterring crime, but in encouraging more local development and business in the area.

End-user needs

It was at this point in time that the Footscray PD, with the help of a security consultant, IPP, compiled and sent out a Request for Proposal (RFP) detailing their high-level requirements for the solution. They offered four main criteria as guidance: 1) the general areas where video surveillance coverage was required; 2) the solution had to be able to grow and accommodate the very latest security technologies; 3) the system had to offer 99.9% reliability where video would always be available; and 4) the video platform

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needed to be user-friendly so new officers with little experience on video surveillance could be trained quickly.

"We wanted to leave it to the market to propose the best solution that could also keep up with the latest technology," explained Detective O'Mahoney. "We prioritized certain requirements and areas of town which needed surveillance coverage and let the integrators suggest both the design and solution."

SNP, the largest family-owned security company in Australia, alongside OPS, Genetec's Value-Added Distributor in Australia, came up with the winning design with Genetec's video surveillance system Omnicast, Axis Communications cameras, Dell servers and Firetide wireless infrastructure mesh network.

The perfect solution

It took SNP and OPS about 3 months to get Footscray's new stand-alone video surveillance system up and running; a truly

impressive feat for a brand new city-wide surveillance system comprising the latest security innovations.

Today, Omnicast manages video feeds from over 35 pole-mounted Axis network cameras spread out across 16 different locations in the suburb. The network cameras connect back to the police station network wirelessly via a Firetide wireless infrastructure mesh network which was chosen for its flexibility and its ability to deliver real-time video at approximately one tenth the cost of a wired system. The 400 Mbps wireless network includes 20 Firetide HotPort 802.11n MIMO mesh nodes positioned at each camera, the police station and other intermediate locations. The wireless nodes form a network of multiple paths from which video can be instantly redirected over alternate routes in case of congestion or power failure.

Video feeds are then cabled down to an off-the-shelf Dell storage array offering 24TB of storage, and finally sent to the Omnicast client application which is installed on two workstations; one in the police station control room and another in the duty room.

“To meet Footscray’s most important requirement of 99.9% system availability, SNP incorporated every advanced failover and redundant archiving feature from Omnicast and even leveraged on-board recording from Axis network cameras,” said Kobi Ben-Shabat, Managing Director at OPS. “When it comes to reliability, Omnicast has it all.”

Omnicast’s Failover Directory provides a hot standby to Footscray PD’s client connections and security system policies in case of an interrupted connection. Omnicast’s Failover Archiving was also incorporated to preserve the communication with the cameras in case of failure and Auxiliary Archiving was used to further strengthen system availability by recording video with different quality and retention time. SNP and Footscray even went one step further to incorporate a revolutionary concept called Video Trickling, made possible by both Axis IP network cameras and Omnicast.

“We needed to use a particular type of camera, in this case an Axis network camera which had onboard recording,” clarified Stuart Pitcher, National Operations Manager at SNP. “If the camera detected it was not talking back to the system, it could actually start copying and saving the video to its built-in SD card.”

Then, Omnicast’s Video Trickling feature would ensure that video created is retained in memory, in case the units were offline. When the connection comes back, Omnicast’s Auxiliary Archiver resumes recording and the system automatically starts transferring the video of the units that were affected by the connection failure. Only the video recorded while units were disconnected is transferred.

More than on-board storage, the Axis cameras, which included AXIS Q6034-E PTZ dome network cameras and AXIS P1344-E and P1346-E fixed network cameras, were perfect for the completely network-based solution offering full IP capabilities and HD video quality of 720p and 1080p. Simple configuration of the cameras in Omnicast ensures video is displayed and recorded at 12 frames per second using H.264 compression.

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“Omnicast is very user-friendly and our police officers find it very intuitive,” said Detective O’Mahoney. “We do run a training program for all new members, but the easiest way to get them familiar with the system is to have an operator buddy-up and watch how another operator maneuvers through the system. After 5 or 10 minutes of playing with the system, they are basically ready to go at it alone.”

The benefits

To date, Footscray PD and Maribyrnong City Council have achieved much more than they expected from their new city-wide surveillance system. According to Detective O’Mahoney, “Robberies and street offenses have drastically decreased since implementing the system. Drug offenses have gone up but we are being much more proactive and efficient at catching more people, so we anticipated this.”

With one control room primarily being used for after-the-fact investigations and the other for 24/7 manned monitoring, Footscray is able to both actively and passively monitor their surroundings.





“If a call comes over the radio, the patrol unit might call into headquarters and ask to have the cameras checked,” described Detective O’Mahoney. “We get a lot of efficiency out of it, in terms of not having to patrol at the wrong time or when nothing is happening at all. On the other hand, when there is a problem, they can actually focus in on the situation and send out the troops.”

Footscray authorities have also been able to apprehend warranted suspects without physical addresses by catching them on cameras and regularly using video footage as supporting evidence in court. This has been facilitated by Omnicast’s Bookmark feature where operators are now required to bookmark every event, and write a really brief description of what was going on, along with the unit code that handled the dispute. Detective O’Mahoney added, “Later on, we can use the search tool to easily find what we are looking for.”

And thanks to Omnicast’s open architecture and other advanced features, Footscray is looking to further strengthen and grow the system. Support from local businesses and real estate developers have ushered in possibilities to widen their reach at no cost to the tax payers. Using Genetec’s Federation, Footscray PD can offer business and residential developments added protection by pulling up their cameras in case of emergencies; a win-win for both police departments who require better situational awareness and for developers and owners who can use the added security as a marketing tool.

Key Features

The AXIS Q6034-E PTZ Dome Camera provides outstanding video quality and performance. The outdoor-ready PTZ dome provides HDTV coverage of large areas, great details when zooming in, and high-speed pan/tilt performance. With Active Gatekeeper, the camera can automatically move to a preset position upon motion detection in a pre-defined area, and track the detected object. For more information, visit www.axis.com.



Footscray is also currently testing mobile capabilities where images of suspects are downloaded and sent to all patrolling officers' emails. "Rather than giving out a description, we can send an actual still image of our suspect with the exact clothing that they are wearing at that time," said Detective O'Mahoney. "We've used it quite a bit on half a dozen iPhones and Android phones so far and it's been fantastic. We've also tested mobile capabilities using the wireless system with in-vehicle laptops so we can watch live footage as well."

As more and more councils around Victoria seek to implement city-wide surveillance systems, there is no doubt to SNP and OPS that Footscray's system will be used as a best-in-class example. The combination of Genetec's Omnicast video management platform, Axis Communications network cameras, Dell Servers and Firetide network makes for an extremely robust and highly-effective crime-fighting tool.

But in this Footscray installation, Detective O'Mahoney summarized it best: "For what we put out as a tender to the market, I had no idea that the quality of the system would be as impressive as what we have ended up with. Omnicast and the capabilities of the entire system continue to astonish us. This new surveillance system has gone completely beyond our expectations."

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